

Claims:-

1. A pressure compensating valve including:
a chamber for containing fluid defined by a flexible barrier trapped
5 between first and second surfaces;
a fluid inlet to provide fluid to the interior of the chamber; and
a fluid outlet to selectively allow fluid to pass out of the chamber;
wherein, movement of the first and second surfaces relative to each
other causes change in contact between the flexible barrier and the first and
10 second surfaces to selectively open the fluid outlet, in a first position, and
occlude it between the flexible barrier and one of the surfaces, in a second
position.
2. A pressure compensating valve according to claim 1, wherein the
15 fluid inlet passes through the first surface into the chamber.
3. A pressure compensating valve according to claim 1 or 2, wherein the
fluid outlet includes an aperture in the flexible barrier which is selectively
occluded by one of the surfaces, in the second position.
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4. A pressure compensating valve according to claim 1 or 2, wherein
there is a passage between the chamber and the second surface, and the fluid
outlet includes an aperture in the second surface which is selectively
occluded by the flexible barrier, in the second position.
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5. A pressure compensating valve according to any preceding claim,
further comprising an exhaust aperture in one of the first or second surfaces
which is selectively occluded by the flexible barrier in the first and second
positions, but open in a third position in which the fluid outlet is occluded.
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6. A pressure compensating valve according to any preceding claim,
wherein movement of the first and second surfaces parallel to each other
causes the flexible barrier to roll along the surfaces to selectively open the
fluid outlet.
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7. A pressure compensating valve according to any preceding claim, wherein a flap-like extension of the flexible barrier selectively opens and occludes the fluid outlet.
- 5 8. A pressure compensating valve according to any preceding claim, further comprising a pressure plate connected to one of the first or second surfaces wherein, in use, the pressure plate experiences a variable working pressure on an enclosed side and a reference pressure on the other side; the pressure differential across the pressure plate causing movement of the first
10 and second surfaces relative to each other to selectively supply fluid to the enclosed side.
9. A pressure compensating valve according to claim 6 , further comprising a bias spring associated with the pressure plate to bias the first
15 and second surfaces into predetermined positions relative to each other.
10. A pressure compensating valve according to claim 6 or 7, wherein the chamber is toroidal, the first and second surfaces are concentric cylinders, the fluid inlet is an annular chamber formed on the outer surface of the outer
20 cylinder, and the pressure plate spans the interior of the inner cylinder.